## General and Comparative Endocrinology

An International Journal

QP 187 G37 Editors-in-Chief

AUBREY GORBMAN
E. J. W. BARRINGTON

Published under the Auspices of the Division of Comparative Endocrinology of the American Society of Zoologists, and the European Society for Comparative Endocrinology

> Volume 20 1973



ACADEMIC PRESS

New York and London

A Subsidiary of Harcourt Brace Jovanovich, Publishers

General and Transfer

An International Journal

Copyright © 1973 by Academic Press, Inc.
All rights reserved

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

Or equilaV

ACADEMIC PRESS



## CONTENTS OF VOLUME 20

Number 1, February 1973 P. J. W. Olive. The Regulation of Ovary Function in Cirratulus cirratus: (Poly-1 ARLETTE GUICHARD, LISE CEDARD, ET KATY HAFFEN. Aspect comparatif de la synthèse de stéroïdes sexuels par les gonades embryonnaires de Poulet à differents stades du développement (étude en culture organotypique à partir de précur-16 M. KEEN COMPHER, JR., AND JAMES DENT. Effects of Hypothalamic Extirpations on Thyroidal and Intermedinal Activity in the Red Spotted Newt. . . . . . 29 W. R. Breneman. Bioassay of Thyrotropin in Chicks with Simultaneous Estima-41 G. J. DAVIS AND R. K. MEYER. FSH and LH in the Snowshoe Hare during the In-53 G. J. Davis and R. K. Meyer. Seasonal Variation in LH and FSH of Bilaterally 61 H. C. Freeman and D. R. Idler. Effects of Corticosteroids on Liver Transaminases in Two Salmonids, the Rainbow Trout (Salmo gairdnerii) and the Brook Trout 69 Milton H. Stetson. Recovery of Gonadal Function Following Hypothalamic Le-76 EDWARD W. Gresik, J. Gerald Quirk, and James B. Hamilton. A Fine Structural and Histochemical Study of the Leydig Cell in the Testis of the Teleost, Ory-86 C. W. Jones, R. E. Peter, and B. T. Pickering. Intraneuronal Transport in the Hypothalamoneurohypophysial System of the Goldfish (Carassius auratus) 99 Amos G. Gona, Theodore Pearlman, and Ophelia Gona. Effects of Prolactin and Thyroxine in Hypophysectomized and Thyroidectomized Red Efts of the Newt 107 H. RAVONA, N. SNAPIR, AND M. PEREK. The Effect on the Gonadal Axis in Cockerels of Electrolytic Lesions in Various Regions of the Basal Hypothalamus 112 DAVID GORDON BUTLER. Effect of Hypophysectomy on Renal Function in the Freshwater North American Eel (Anguilla rostrata LeSueur) 125 RICHARD F. WALKER. Temperature Effects on Thyroid Function in the Lizard Sce-137 S. W. C. CHAN AND J. G. PHILLIPS. Effects of Gonadectomy and Replacement Therapy on Adrenal Function in the Domestic Duck, Anas platyrhynchos. . . 144 G. P. Nirmalan and G. A. Robinson. Changes in the Plasma Volume (125I-Serum Albumin Label) and the Total Circulating Erythrocyte Mass (51CrO<sub>4</sub> Label) in Japanese Quail Treated with Stilbestrol or with Testosterone. . . . . 150 AKE L. LARSSON. Metabolic Effects of Epinephrine and Norepinephrine in the Eel 155

Fermín C. Iturriza. Autoregulation of the Secretion of MSH in Incubates of Toad

168

Pars Intermedia . . . .

ity of Ovine LH in the Lizard	
lactin-Producing Cells in the Hypophysis of the Newt, Triturus cristatus car-	186
nifex Laur	177
C. Giunta, E. Campantico, F. Bianchero, A. Ciancia Perone, and M. Vietti. Biochemical Data on Some Organs from Normal or Prolactin-Treated Xenopus laevis (Daudin) Adults Reared in Fresh and in Salt Water	183
RICHARD E. JONES, JAN J. ROTH, ALTHEA M. GERRARD, AND RICHARD G. KIELY. Endocrine Control of Clutch Size in Reptiles. I. Effects of FSH on Ovarian Follicular Size-Gradation in Leiolopisma laterale and Anolis carolinensis.	190
M. Zuber-Vogeli et F. Xavier. Les modifications cytologiques de l'hypophyse distale des femelles de Nectophrynoïdes occidentalis Angel après ovariectomie	199
Notes	
Asha Chandola and J. P. Thapliyal. Effect of Photoperiod on Thyroid Function of Spotted Munia, Lonchura punctulata	214
roxine Secretion Rates in Desert Lizards: Dipsosaurus dorsalis and Calli-	015
saurus draconoides	217
Number 2, April 1973	
N. J. MACKAY. The Effects of Methallibure (I.C.I. 33,828) and Thiourea on Gametogenesis in the Firetail Gudgeion, Hypseleotris galii	221
THOMAS G. CONNELLY. Fine Structure of the Normal, Transplanted and Postmetamorphic Pars Distalis of the Mexican Axolotl, Ambystoma mexicanum	236
ships in the South American Lungfish Lepidosiren paradoxa	256
Herring Gull (Larus argentatus) Adrenals	274
ticosteroids by the Herring Gull ( <i>Larus argentatus</i> ) Adrenal Glands S. W. C. Chan and J. G. Phillips. Circadian Variation in Activity of the Duck	000
	283
(Anas platyrhynchos) Adrenal Gland	283
(Anas platyrhynchos) Adrenal Gland	
(Anas platyrhynchos) Adrenal Gland	291 297
(Anas platyrhynchos) Adrenal Gland	291 297 305
(Anas platyrhynchos) Adrenal Gland.  Leonard F. Bélanger, Marie T. Dimond, and D. Harold Copp. Histological Observations of Bone and Cartilage of Growing Turtles Treated with Calcitonin Norma R. de Martinez, M. Carmen Garcia, Margarita Salas, and J. L. RCandela. Proteins with Insulinlike Activity Isolated from Oyster (Ostrea edulis L.) Hepatopancreas.  J. N. Ball and P. M. Ingleton. Adaptive Variations in Prolactin Secretion in Relation to External Salinity in the Teleost Poecilia latipinna.  M. M. Joseph and Albert H. Meier. Daily Rhythms of Plasma Corticosterone	291 297 305 312
(Anas platyrhynchos) Adrenal Gland	291 297 305
	docrine Control of Clutch Size in Reptiles. I. Effects of FSH on Ovarian Follicular Size-Gradation in Leiolopisma laterale and Anolis carolinensis.  M. Zuber-Vogeli et F. Xavier. Les modifications cytologiques de l'hypophyse distale des femelles de Nectophrynoïdes occidentalis Angel après ovariectomie  Notes  Asha Chandola and J. P. Thapliyal. Effect of Photoperiod on Thyroid Function of Spotted Munia, Lonchura punctulata

IARYANN M. PLOWMAN AND W. GARDNER LYNN. The Role of the Thyroid in Testicular Function in the Gecko, Coleonyx variegatus	342
AVID G. ATWOOD. Correlation of Gamete Shedding with Presence of Neurose- cretory Granules in Asteroids (Echinodermata)	347
. J. Mordue (Luntz) and K. C. Highnam. Incorporation of Cysteine into the Cerebral Neurosecretory System of Adult Desert Locusts	351
ETER K. T. PANG, ROBERT W. GRIFFITH, AND MARTIN P. SCHREIBMAN. The Pituitary Gland and Calcium Metabolism in Fundulus diaphanus (Teleosteii)	358
ICHAEL D. LAGIOS. Follicle Boundary Cells in the Adenohypophysis of the Chondrostean and Holostean Fishes: An Ultrastructural Study of Their Relationship to the Follicular Lumen, to Endocrine Cells, and to the Hypophysial	
Cleft	362
in Pituitary Extracts of Elasmobranchs	377
R. Zelnik and K. Lederis. Chromatographic Separation of Urotensins	392
Ionique Jallageas et Ivan Assenmacher. Effets du jeûne et de la castration sur la cinétique du métabolisme de la testostérone chez le Canard	401
HRISTEL MARSCHALL AND DANIEL H. GIST. Glycolytic and Lipolytic Effects of Ovine FSH and Estradiol- $17\beta$ in the Lizard Anolis carolinensis	417
F. THORNTON AND P. J. EVENNETT. Changes in the Fine Structure of the Ovarian Follicle of the Toad (Bufo bufo) prior to Induced Ovulation	413
IANFRED GERSCH. Introductory Address Presented at the Sixth Conference of European Comparative Endocrinologists, Montpellier, 1971. General Aspects and Problems in Comparative Endocrinology	425
RRATUM	436
Number 3, June 1973	
DAVID O. NORRIS, RICHARD E. JONES, AND BRUCE B. CRILEY. Pituitary Prolactin Levels in Larval, Neotenic and Metamorphosed Salamanders (Ambystoma	
tigrinum)	437
l'évolution de l'intestin, chez la larve de Discoglossus pictus Otth	443
ATRICIA S. BROWN AND STEPHEN C. BROWN. Prolactin and Thyroid Hormone Interactions in Salt and Water Balance in the Newt Notophthalmus viridescens	456
MAVID O. NORRIS, RICHARD E. JONES, AND DAVID C. COHEN. Effects of Mammalian Gonadotropins (LH, FSH, HCG) and Gonadal Steroids on TSH-Induced Metamorphosis of Ambystoma tigrinum (Amphibia: Caudata)	467
VILLIAM B. RHOTEN. The Cellular Response of Saurian Pancreatic Islets to Chronic Insulin Administration	474
RAVONA, N. SNAPIR, AND M. PEREK. Histological Changes of the Pituitary Gland in Cockerels Bearing Basal Hypothalamic Lesions and Demonstration	
of Its Anti-HCG Immunofluorescence Reacting Cells	490

JONATHAN L. COSTA. Histological Characterization of "Epinephrine" and "Norepinephrine" Cells in the Adrenal Medulla of the White-Footed Mouse, Pero-	
myscus leucopus	498
Julia Uranga. Effect of Glomerulopressin, Oxytocin, and Norepinephrine on	
Glomerular Pressure in the Toad	515
PAUL LICHT. Induction of Spermiation in Anurans by Mammalian Pituitary	
Gonadotropins and Their Subunits	522
GARY C. PACKARD AND MARY J. PACKARD. Preliminary Study of the Influence of	
Thyroxine, Temperature, and Sex on Oxygen Uptake by Tissues from the	
Spadefoot Toad Scaphiopus bombifrons	530
EUGENE SPAZIANI AND STANLEY B. KATER. Uptake and Turnover of Cholesterol-	
14C in Y-Organs of the Crab Hemigrapsus as a Function of the Molt Cycle	534
RICHARD E. JONES, ALTHEA M. GERRARD, AND JAN J. ROTH. Endocrine Control of	
Clutch Size in Reptiles. II. Compensatory Follicular Hypertrophy Following	
Partial Ovariectomy in Anolis carolinensis	550
J. F. Wilson and J. M. Dodd. Effects of Pharmacological Agents on the in Vivo	
Release of Melanophore-Stimulating Hormone in the Dogfish, Scyliorhinus	-
canicula	556
RICHARD E. JONES. Differential Effects of Ovine LH and Human Chorionic	~ 01
Gonadotropin on Testicular Interstitial Cells of the Lizard Leiolopisma laterale	567
RAINER KELLER AND ELIZABETH M. ANDREW. The Site of Action of the Crustacean	
Hyperglycemic Hormone	572
TED D. McKinney and James N. Pasley. Effects of Social Rank and Social	57
Disruption in Adult Male House Mice	579
Notes	
R. CALVERT AND A. PUSTERLA. Formation of Thyroid Follicular Lumina in	-
Rat Embryos Studied with Serial Fine Sections	58
AUBREY GORBMAN AND MOHAMED HYDER. Failure of Mammalian TRH to Stim-	70
ulate Thyroid Function in the Lungfish	58
MILTON FINGERMAN. Behavior of Chromatophores of the Fiddler Crab Uca	
pugilator and the Dwarf Crayfish Cambarellus shufeldti in Response to Synthetic Pandalus Red Pigment-Concentrating Hormone	589
PAUL LICHT. Relative Potencies of Purified Mammalian Gonadotropins on the	000
Uptake of Radiophosphorus by Chick Testes	592
E. F. SKORKOWSKI AND L. H. KLEINHOLZ. Comparison of White Pigment Con-	001
TT C C 1D 77	59
The state of the s	59
The second secon	59
SAUS SAUS SAUS	
AUTHOR INDEX	60
Effective with this volume, Subject Indexes for General and Comparative Endocrinology will be published annually. The Subject Index for this volume (Volume 20) will appear in the December issue as part of a cumulative index for the year	
1973.	